ON

HEPATITIS

Philadelphia

October. 1825

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HEPATITIS

Diseases of the liver are most frequent in autumn or near the vernal and autumnal equinox, when the weather is changeable and excessive heat is succeeded by severe cold.

The liver like other internal organs, is also liable to inflammation and it is more so, than any part of the body, in warm climates; where hepatitis occurs more frequently than in cold countries, particularly in the E & W India here after a long residence, few strangers from temperate latitudes escape the disease and as the lungs are more frequently the seat of disease in the middle regions, so is the liver in the tropics.

The inflammation of this gland, is of two kinds, more or less acute and chronic

The former by its active operation and rapid influence, unless quickly counteracted, soon destroys the energies of the system. And in this climate the acute is comparatively rare in respect to the chronic.

Acute. the characteristics are pyrexia or a febrile affection, tension and pain of the right hypochondrium, which is often pungent as in

pleuritis, but sometimes dull; pain in the clavicle and top of the right shoulder, uneasiness in lying on the left side, difficult respiration, dry cough, vomiting, hiccup and frequently some degree of jaundice; which exhibit the essential character of true inflammation.

Causes. Many of the same causes producing pneumonia and other visceral inflammations, also excite acute hepatitis, as a plethoric habit and the application of cold to a body heated or fatigued, whence the two diseases sometimes exist together. But some causes are more particularly connected with the production of hepatitis than of other inflammations.

The acute species is more often the effect of tropical climates and intense summer heats which, by their excessive stimulus on the hepatic system through the sympathy of the skin, accelerate the sluggish circulation of the liver and excite it to morbid and irregular action often with a hurried secretion and consequently with imperfect bile: thus heat deranges its functions and thereby predisposes the organ to inflammation. Saund.[rs] + supposes heat an exciting cause, but Johns.[n] ‡ says from attentive observation, that even in tropical regions, nine cases in ten of the acute, owe their immediate existence to the application of cold. As

+ Saunders on the Liver page 293.

‡ Johnson on the Liver page 67

a high range of temperature acting on a healthy constitution, spontaneously increases, independently of any intemperance, the cutaneous and biliary secretion beyond the natural standard and debilitates the secretory capillaries, in consequence of which the perspiratory and biliary secretions continue after the cause or necessity has ceased, and thus causes them sooner to become torpid on the application of cold; hence the perspiration and the biliary secretion are arrested, the consequence of which is a temporary obstruction to the free transmission of blood from the portal to the general circulation; the frequent repetition of which is a source of hepatic inflammation especially in hot climates (The Asiatic and African, though inured to the high temperature of their climates, still guard against excessive perspiration and its too frequent consequence, suppression, by keeping the skin soft and unctious and thus maintaining an equal flow of perspirable matter and bile, the latter is proved by the regularity of their bowels and less liability to hepatic diseases). Here then we have two very opposite states of the liver and its functions; 1st an inordinate action with increased secretion, the periods gradually shortening; 2nd torpor in the vessels of the liver, with deficient secretion, the periods progressively lengthening; and in both cases the bile is vitiated.

Intemperance, especially in the use of vinous or ardent spirits; though ardent spirits has always been considered foremost amongthe internal exciting causes of hepatic inflammation, more probably it seldom is the cause of the acute; although a peculiar chronic derangement very difficult to be managed and often terminating in dropsy, and especially of function, are in a great measure occasioned by it. Choleric or irritable disposition in the male sex, is also a predisposing cause, showing the close sympathy between the mental and hepatic functions. Worms obstructing the ducts; case, in a military man two lumbrici were discovered, one in the cystic, the other in the hepatic duct, and others in the intestines, Vs. Among the many excellent preparations of Professor Gibson, there is one in which the biliary ducts of the liver are completely filled with lumbrici. Derangement of the digestive organs. Suppressed secretions. Redundant and highly acrid biliary secretion from the stimulus of heat, irritates the liver and induces disorder; in what this vitiation consists it is difficult to say, in high degrees of it attending a hurried secretion, the bile occasionally assumes all the shades between deep green and jet black, possessing, at one time, an acidity which sets the teeth on edge, or more frequently an acrimony that seems to excoriate

the stomach and juices, or that gives the secretory function a dull, passing through the intestines. Violent operation of cities. Inflammation. Compression. Collections of liquid matter in the liver. Long continued intermittent and remittent fevers, from the repeated accumulation of blood in the cold stage; in autumnal epidemic fevers after the hottest summers, a slight inflammation of the liver often an attendant and when the fevers are removed without removing the obstruction of the liver, hepatic remains in health of the patient yellow saffron colour languishes and is with great difficulty restored to a sound state of health. Great passions mental emotions or disturbances of mind are frequent causes of obstruction and disease of the liver; especially the depressing passions, as grief strongly predisposes to hepatitis and cholera. Their first effect often felt in the organs of digestion, — along in the stomach and later in the bowels in acrimes. The food passes into the duodenum imperfectly digested and meets with a scanty supply of ill conditioned bile, the chyle is imperfectly elaborated, excess accumulate and copious fermentation takes place with the extrication of air, distressing colic and borborygmi; to procure relief from these, spirituous tinctures and cordials are used which frequently lead to more dangerous indulgences and excesses. The malady I say were

intended to alleviate: case by the neglect of the captain of a gun, it discharged while two men were in the act of loading, at both had their arms blown away and were otherwise dreadfully shattered, and one died, which produced such remorse and grief in the mind of the captain that he was immediately seized with hepatitis, though he was in the prime of life and health and in a few days he expired." Thus the liver, like the lungs, in Europe, being predisposed to disease from the general effects of the climate, suffers readily and obviously in consequence of the close sympathy between the liver and the brain which is strongly illustrated in hot climates. Various calculous concretions in the substance of the liver; case a hard stone was found in the substance of the liver weighing ℥ij, without attachment to the pori or ducts though such rarely occur, Rusch: chalky friable concretions are found especially in the livers of stall fed cattle when living on dry food without exercise but they are poor when living on fresh grass and take exercise, since they are not found in the spring; large calculi in the gall bladder; steatoma or a scrofulous state of the glands; case had a scrofulous neck for many years and after death the liver was found adhered on the outside and full of glandular tubercles containing a substance like jelly and plaster the liver was

on the [illegible] 36[illegible]

inflamed and double its usual weight; these calculi scarify & by long compressing the contiguous parts, obstruct the free circulation of the blood through the liver and vena portarum and even prevent the expulsion of the bile already separated and an obstruction being thus governed an exciting cause will produce inflammation.

Exciting causes are either external or internal. Partial applications of cold or wet or sudden and intense cold introduced or applied, from the air, bathing or drinks applied to the stomach suddenly with cold liquids, especially with ice water, during or subsequent to being in a great heat or sweat or overfatigue; violent or unusual exercise; these are the exciting causes in 5/8 of the cases that occur, except when produced by external violence or falls especially such as occasion fracture of the cranium; case 1st. about 12yr and struck his head against a ladder, he had a more or less severe shock, no alteration noticed for several months when violent, chills & rain and terminated in suppuration and death. Violent exercise. High living. And lastly the result is often induced by chronic inflammation. Sudden vicissitudes are highly injurious to the system in general and to the hepatic in particular, yet an annual change is eminently beneficial in relieving

the hepatic system from excessive action and increasing the whole vessels relaxed by previous heats. The [illegible] of the liver is generally preceded by congestion.

Symptoms. Hepatitis generally commences with most of the ordinary symptoms of visceral inflammation, rigors, some degree of shivering or sense of chillness sometimes so slight as to evade recollection with paleness of countenance, shrinking of external parts and small, quick, contracted pulse, evincing a cold stage of vascular congestion; succeeded by considerable fever and the subsequent reaction will be in proportion to the cold or chilly stage; increased heat and dryness of the skin; considerably active pulse, strong, full, hard and frequent from 90 a 120; permanent and pungent pain follows in the right hypochondrium, in obscure cases sometimes in the left or in both near the spine, though sometimes it is dull; it is also felt under the margin of the ribs shooting towards the back and ascending mostly to the right clavicle and shoulder blade, "whenever this occurred it rendered the nature of the disease very certain", Cr.[illegible], but it seems to be produced by almost any morbid excitement of this organ, as from the obstruction of gall stones" Gr. though sometimes it is in the left shoulder when the left lobe is affected;

[illegible] 293. [illegible] Clarkson Fevers page 59.
[illegible] 81.
[illegible] page 93.

when the pain is violent, the patient cannot be moved without considerable uneasiness; it is considerably increased by pressure on the region of the liver and often extends high into the chest and darting resembles pleurisy and as in this complaint, so the pain frequently is increased from deep inspiration; these symptoms resembling those of pleurisy and other inflammatory affections of the chest, are liable to mislead the unwary practitioner; frequently pain exists for some time in the region of the liver before the commencement of fever: sometimes the liver is perceptibly enlarged; cough seldom appears immediately, unless the disease is conjoined with an affection of the lungs. pressure on the part excites it more frequently, and it is more frequently dry than humid. the latter arises from the general inflammatory diathesis causing an increased secretion of the mucus membrane of the lungs, the former from the inflamed membrane of the convex surface irritating the diaphragm; when the cough is long and expectoration abundant, it may diminish the inflammatory diathesis and materially assist in promoting resolution: oppression and difficulty of breathing, usually quickened and sometimes painful: difficulty of lying except on the side affected, but when the convex part of the liver is

affected the patient sometimes can only lie on the left side, occasionally the patient is unable to lie on either side and experiences most relief lying on his back a little inclined to the right with the upper extremities considerably raised: the stomach is sometimes extremely irritable, nausea, sickness or violent retching, often with a vomiting of bilious matter: great watchfulness and occasional delirium; loss of appetite; extreme thirst; tongue dry and generally covered with white or yellow fur, extending to the mouth and fauces; dejection of spirits; sometimes hiccup; bowels irregular, often obstinately costive or a diarrhoea and the stools of a clay colour showing an insufficient intermixture of bile with the stools, but sometimes a superabundance of it is thrown into the primae viae occasioning considerable derangement of the evacuations and secreted by vomiting and stool, bilious flux is almost pathognomonic of tropical hepatitis from the great irritation that prevails and as the gorged vessels are apt to give way from debility the flux is intermixed with blood; (Tonsel says he never saw a case of increased biliary secretion in hepatitis) the urine is scanty often tinged with bile or of a deep saffron colour and a general attendant on both acute and chronic is a heat or scalding in making water, which seems to be occasioned by the passage of bile

n ser pg 11.

along the urinary organs. A* sallow countenance sometimes a yellowish hue of the conjunctiva and occasionally actual jaundice. In most cases of actual inflammation the secretion of bile is increased,* though its passage is frequently impeded and thus jaundice is not unfrequent and arises from the bile not passing readily into the common duct from the inflammed liver pressing on the pore biliarii; from mechanical causes, as concussion the biliary secretion is more affected than from causes in general; although the yellow suffusion of the eyes and skin indicates obstruction, its absence is no proof that it does not exist, because when the investing membrane is the principal seat of disease, the secretory office is not so much disturbed as when the parenchyma is affected; and inflammation of the organ of secretion without any such symptom, but even when jaundice exists it is not a distinct symptom of hepatitis, as the fæces may be light coloured and the eyes, skin and urine peculiarly yellow from the previous stagnation induced by tumors in the bile ducts. The appearance of the blood is remarkable just before coagulation when the red part falls to the bottom and the buffy coat not yet formed, it appears of a dull green colour and the same takes place in jaundice, so that the blood first drawn is not only even during active inflammation. But in tropical climates I have comparatively

* Gilbert on the Liver page

seldom seen violent rigors, high fever, hard, quick and full pulse, acute pain to excite in those just from Europe or within 12 years after their arrival and of such, these acute symptoms will be confined principally to the young, robust and plethoric; but generally in the tropics the disease approaches in a more doubtful appearance, though equally dangerous and often running more rapidly to suppuration and in a few days it would destroy the organ and life unless speedily checked: the primary symptoms indicative of the inflammatory affection are often very slightly marked, the pain in the right side is not so distinct or acute as the patient takes little notice of it until, when he mentions it, it has been of short duration, about the pit of the stomach or navel side and it is only from observing the secondary symptoms, such as flux in tropical countries or diarrhœa, cough and pain at the top of the shoulder only from a sense of weight or uneasiness about the epigastrium or from fulness and oppression about the low[er] part of the chest or from tenderness on pressing the liver with the other, with some yellowness of the eye and skin, that the state of the disorder is to be ascertained, and which constitutes the difficulty in the management." This appears to be a very accurate description, excepting the flux and ready termination in suppuration, of what is also often observed in temperate regions.

Tropical hepatitis partakes more of congestion, torpor and obstruction; but in temperate climates it partakes more of active inflammation like that of the lungs, hence in order to induce acute hepatitis it is necessary that the liver at the time of attack should be, at least, in moderate health and vigor." Good's Study of Med. vol. 2 page 20.

In hepatitis as in all other diseases, the symptoms are not always of the same degree of violence and severity, but vary in the symptoms are more or less severe according to the degree of sensibility of the part affected. When the inflammation occupies the convex inferior part which is contiguous to the stomach, the digestive functions of the stomach are more disturbed, commonly from some inflammation being communicated to the stomach, producing sickness or retching, vomiting, hiccup, great thirst and other symptoms of gastritis, are here more observable; or as the liver is supposed to possess little sensibility and where the substance of the liver is generally affected, the pain is more obtuse and fixed in the region of the liver or is reflected to the back, the breathing is difficult and short, especially above, but the pain and fever will increase with the inflammation extending to the membranes; the inflammation

on the concave surface may also be readily communicated to the gall ducts and hence more readily produce jaundice. Even when suppose the affection of the concave part, is the only cause of attendant hepatitis attended with it. When the inflammation occupies the superior convex part with its peritoneal covering or its ligaments to the parts is acute in the region of the liver like pleurisy and is much increased by external pressure and the pain is more violent, considerable tension of the side, pulse frequent, strong & hard or if the peritoneum more immediately contiguous to the diaphragm is affected, the disease is apt to extend to it and occasion very difficult and painful respiration, inward frequent cough, acute sensation in the thorax, extending to the shoulder and down the affected side

But mostly the symptoms predominant in the sensible enlargement of the parenchyma of the liver influencing by distension, the membrane, resemble exactly those peculiar to numerous inflammation. And these symptoms characterize in particular, as at this my 2d Thesis observation during practice of many years in the Hospitals in England does not enable me to say are so unequivocal as represented by Cosologists, Case

[illegible]

act. 70 muscular and sanguine was seized with the symptoms of inflammation of the concave surface and the [illegible] appeared on the convex surface and discharge external; and constitutional health was restored, a small fistula remaining for one year when a fit of sneezing a gall stone [illegible] was passed and fistula healed the constitutional was proved.

"It is probably, the acute spasms is a spasm of the external part of the [illegible] in the [illegible] of the liver. ‡ Or the acute pain extending to the arteries or nutrient vessels and the chronic spasms of the veins were very capable, yet so that it may easily follow as a consequence of the other."

‡ Though there is no evidence or probability of this, yet the former distinction is merely conjectural. But inside supports the notice by supposing that as the [illegible] of the liver is exceeding [illegible] in proportion to the arterial blood circulating through it, that there is something in arterial blood that goes to more active and vigorous purposes and by far the greater portion of blood passing through the liver is venous which is subservient purposes than arterial, so there are grounds for believing that chronic inflammation of the liver is of the vena portarum and the acute is of the hepatic artery. But as

§ Practice vol 1st. Sect. 417
Diseases of the Liver, page 311.

The blood distributed by the branches of the vena portarum in the liver must be so far exhausted as to be incapable of all the uses accomplished by arterial blood in other glands and although the vena portæ be peculiarly adapted to secrete bile it is not capable of supplying the natural energy to the substance and vessels of the liver, so it is evident that arterial blood is sent to this gland through a branch of the arteria hepatica and the larger vessel the hepatic accompanies the greater the vein. Now knowing, that arterial blood nourishes the organ and together with the nerves supports its actions and that the venous blood is merely the pabulum of its secretion; it is known that, in the same proportion, the action of any part is increased so is this supply of vital energy more abundantly supplied to such part; so no increased action can take place in the secretory capillaries or the minute extremities of the vena portæ in any part of the liver, without a corresponding change in the arterial or nutrient capillaries of the same part on whose support all increased action must depend; as these are the agents by which the liver performs its functions and is supported in its action on the venous blood of the portal system: it must be concluded that no increased or altered action is in-

flammation can, probably, occur in the secretory capillaries, without an increased or altered action or inflammation in a greater or less degree, in the arterial capillaries, in conjunction with an increase or denutrition of nervous energy; it follows, every inflammation of the substance of the liver, whether acute or chronic, is an affection of the minute ultimate vessels of both sets of vessels, the secretory arteries and venous capillaries.

Diagnosis. The great size of this organ, and its contiguity of surface to so many other important parts and the seat and kind of pain vary so considerably as often to occasion some doubts as to the real seat of its affection. The diseases which are mistaken for it are pleuro-pneumonia, gastritis, rheumatic affections of the muscles in the neighbouring parts, sometimes inflammation. &c, sometimes the least pressure under the margin of the ribs, will cause excruciating pain, while in others as was the case of Johnson[1] the seat of pain and enlargement will be in the centre and even to the left of the epigastrium.

When that part of the liver, in contact with the diaphragm, is inflamed, the concomitant cough and pain on inspiration often make it difficult to distinguish hepatitis from inflammation in the thorax and have led patients and practitioners to suppose the pleura or lungs were the

[1] Morbid on the Liver, page 63.

the seat of disease, though in most cases it may be readily distinguished from pneumonic inflammation by the cough not being so severe or painful and being generally unaccompanied with expectoration and generally not preceding or coeval with the pain and difficulty of breathing as the cough is generally coeval at least with the pain in pneumonia; I never knew the cough to take place until the skin after the pain had undergone inflammation in hepatitis.† and a gradual and deep inspiration will not augment the pain in hepatitis as much as it does in pleurisy, nor will it produce as much cough and it is also difficult to make a patient under the pain of the ribs of the right side, while it increases the pain in hepatitis; and little or no difficulty in turning in bed and in hepatitis bending to the right side increases the pain, pleurisy it does not; and by the less degree of dyspnoea by the sallowness of the countenance and by the pain of hepatitis extending to the shoulder, this and the difficulty of lying on the opposite side will occasion pain, when pleurisy in lying on the affected side is most painful, are rather more indications of hepatitis from some violent inflammations, there is no pain in the shoulder and the easiest posture is on the back. Still it is an important fact and should always be remembered that generally it is hepatitis with most ease on the

† R. Pemberton on the Abdominal Viscera, pag. 90

[illegible] affected with [illegible] retches with [illegible] cost [illegible] the opposite side.

From inflammation of the stomach or gastritis, this disease may not be distinguished by the absence of gastric sensibility and that of tabidity, which renders gastritis so dangerous and distressing, by the heat and pain not being increased on taking any thing into the stomach, which are then extreme in gastritis and by the stomach being able to retain the liquids and medicines received into it without immediate rejection of them, by less prostration of strength, and the febrile symptoms in hepatitis, having nothing of that typhoid type attending gastric inflammation, by the great fulness of the pulse, the colour of the stools and urine, by the seat of disease discovered by pressure and by the symptomatic pains in the clavicle and shoulder; some of which also distinguish it from gastritis

The following are noticed as distinguishing inflammation of this organ from spasm of its biliary ducts, although is seems doubtful, if spasm of its ducts ever exists, except at the termination of the hepatic ducts in the duodenum. From spasm of the biliary ducts occasioned by impacted calculi, hepatitis may readily be distinguished by the strong febrile excitement and other circumstances at the beginning

by the pain being permanent and there being nausea, by the frequency of the pulse being upwards of 100 and small, the patient always preferring to keep the body in a strait quiescent posture, whereas the greatest ease in spasm of the biliary ducts, is obtained by bending the body forward on the knees; though spasm of the biliary ducts often terminates in inflammation.

From Muscular pain, this being accompanied by little or no fever, is diffused and frequently removes from place to place and is more influenced by every posture of the body, and it generally alternates with rheumatic pain in one or more joints of the body.

Also the state of the bowels will enable us to judge of the existence of hepatitis, for in most inflammatory states of the liver, particularly of the glandular structure, the bowels are constipated or in a state of dysenteric relaxation, while the appearance of the fæces and urine always indicate a greater derangement of biliary secretion, than in inflammation of any contiguous viscera. The alvine discharge of urine though common to many other internal inflammations, yet particularly so in that of the liver. The mind also is more perturbated both in acute and chronic than in any other species of inflammation

excited of the brain, this probably results partly from the sympathy existing between these two organs, but principally from the suspension or derangement of the biliary secretion which exerts a peculiar influence on the mental functions.

But at the very commencement of acute hepatitis, [illegible] from inflammation of any [illegible] [illegible] [illegible] [illegible] [illegible] because the speedy reduction of vascular excitement by copious venesection is of [illegible] importance in each. [illegible] [illegible] [illegible] of the highest importance to make the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] order to discover [illegible] [illegible].

Examination of the hypochondria

Hippocrates gave strict attention to the hypochondria and often [illegible] [illegible] [illegible] [illegible] [illegible] we examined [illegible] [illegible] it is necessary before we can speak with decision or pretty tolerable [illegible] [illegible] that there is no enlargement or [illegible] of the other organs. When the liver becomes enlarged [illegible] [illegible] [illegible] cause as scirrhus [illegible] [illegible] [illegible] seems soon to be felt through the abdominal muscles under the [illegible] of the [illegible] and the enlargement and [illegible] [illegible] of [illegible] is [illegible] grasping the [illegible] as if attempting to lift the

acute edge of the liver is in the [illegible] small [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
to increase the [illegible] of the abdomen [illegible] [illegible]
the gravitation of the mass to the [illegible] where [illegible]
or by [illegible] with the [illegible] under the ribs [illegible] [illegible]
[illegible] back with the [illegible] [illegible] [illegible]
[illegible] of the [illegible] and [illegible] [illegible] the resistance and
[illegible] of the mass. The left side [illegible] [illegible]
[illegible] but [illegible] difficult to be [illegible] [illegible].
Nevertheless the depression of the diaphragm and consequent protru-
sion of the liver from disease of the thorax as [illegible] of the lungs [illegible]
the [illegible] of hardness and enlargement of the liver again by suppuration
of the lungs and consequent rising of the diaphragm. The liver is sometimes
so elevated as to be further retracted under the false ribs but in cases of accu-
mulation of liquid matter within the lungs the liver mostly descends con-
siderably below the ribs; if the accumulation is so immense as to fill the
whole right cavity and distend the diaphragm permanently, the liver
which is attached to it, will be necessarily pushed downward, but it happens
that all collections of fluid do by their pressure effect and diminish the capa-
city

of the ribs rather than contracted the muscles of the abdomen are employed in expiration for the elevation of the ribs and consequent diminution of the capacity of the chest; but still the liver does not descend probably from its own increase of size; case, the liver was descending to the umbilicus and very hard, it was supposed the principal seat of the disease, but on examination a vast scirrhus of the right lung was discovered pressing up the heart and its vessels and obstructing the circulation of all the abdominal viscera were distended with blood the liver was more voluminous than ordinary and nearly of a black colour, but after its substance was opened, a great clots of blood were discharged and after wards the liver applied it almost approached its natural size and had not undergone any alteration and such enlargement of the liver is occasionally combined with dropsy of the pericardium

Prognosis. The ability of the practitioner consists in Hippocrates. "The practitioner foresees and foretells what patients will expire and which of them will recover he will be much better able to preserve those that are recoverable and in the worst cases he will keep clear of blame; and he will deservedly make all persons admire him and esteem him a great physician."

Favourable This disease is seldom attended with patal consequences in a limited time. If it cause has suddenly appeared without any previous illness and in a healthy strong constitution, or drawing blood, the only be confined, term and slight, or severe; and where the symptoms are severe there is reason to suppose that the disease occupies the membranes. The duration is often short, and the termination is mostly in resolution; the disease is sometimes carried off favorably, and spontaneously by, haemorrhage from the nose or hemorrhoidal veins; by mucous and profuse perspiration; by bilious diarrhoea about the 3, 5 or 7th day; by copious evacuations, which are depositing a copious red or white sediment; by some critical eruptions; in a great increase of bronchial secretions; by other critical evacuations, and it is not improbable that a mucous discharge, or, lable lymph may be favorable though attended with distress; and in a few instances by erysipelatous inflammation of some external part; with an abatement of the symptoms, or some other critical evacuations. The pulse becomes frequent and the menstrual flux not naturally increased by the medicines. The tonsils recover when they have been much enlarged though with violent and dangerous

yet not distinctly hectic . . . The Diar. of Fever.

Unfavourable. When the disease creeps on insidiously the patient's gradually; the surface, [illegible] and greenish; the most unfavourable symptoms are the [illegible] much exhausted and covered by the [illegible] pain and fever [illegible]; when the disease occupies the [illegible] generally tends to suppuration; [illegible] and [illegible] and [illegible] in the legal reason confined to one spot and [illegible] a few days full and frequent pulse, considerable heat and thirst, dry skin, obstinate constipation, frequent and severe rigors, denote the [illegible] suppuration: though the symptoms are not always very obvious. A dissemination of pain with [illegible] or throbbing and [illegible] or dull sense; uneasiness [illegible] the right hypochondrium, [illegible] pulse more frequent [illegible] fever [illegible] or great thirst transient flushes of the [illegible] succeeded by relaxation and severe rigors or unperiodical sweats, sweats about [illegible] and a preponderating pulse [illegible] and [illegible] absolutely takes place: [illegible] very

apparent. Where however [illegible] we have never seen a case recover without [illegible] Sometimes the [illegible] case very sudden, so intense and [illegible] excessive death [illegible] sudden collapse of the whole body, [illegible] thirst, and delirium or sudden and complete loss of strength, death [illegible] gangrene.

Treatment The general plan of treatment is all that can be detailed but the adaptation of the other remedies must be left to the discretion of the physician. In some cases [illegible] recovering slowly but the disease [illegible] during the [illegible] stage, particularly when the inflammatory symptoms [illegible] and inclination to vomiting [illegible] to check the second [illegible] of the system a [illegible] inflammation, as much as possible to relieve pain [illegible] inflammation and [illegible] the [illegible] and to derive considerable [illegible] this [illegible] the disease, before the [illegible] inflammation has [illegible] of resolution. For the disease is [illegible] rapid [illegible] magnitude [illegible] of the greatest [illegible].

To [illegible] this [illegible]

Too soon the one that [illegible] to waste away.

Since the more prominent [illegible] bloodletting, fomentation.

Bloodletting. This [illegible] designed sometimes [illegible] the inflammatory congestion of the [illegible] and sometimes to lower the [illegible] constitution and thus to counteract the effect [illegible] remedy [illegible] further both of these several [illegible][‡] Here blood in particular may be carried [illegible] extent not common and scarcely warranted [illegible] other complaints. From a robust and vigorous man near 4 lbs. of blood have been taken in one day with safety [illegible] laudable.[+] The vast [illegible] frequent mode of their application. And great care is necessary not to have [illegible] chronic [illegible] from inflammation [illegible]

General bleeding. When the constitution will admit and the symptoms run high, the pain acute, pulse full and strong, [illegible] considerable, it will be necessary at the very [illegible] or as soon as possible, to adopt general and copious depletion [illegible] from an orifice made in the arm, [illegible] proportioning the quantity to be abstracted to the violence of the symptoms, to the severity of the pain, to the

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[+] Caldwell see [illegible]

[‡] [illegible]

degree of fever present, to its effects and to the circumstances of each individual case. For local inflammation is always an urgent and sudden effect on the system, and is at its commencement, for a short time, though the general strength is much weakened, which is greatly increased in diseases requiring repeated venæsections; it is important that the patient should be sufficiently large to admit of a free flow of blood, and longer time is occupied in the venæsection the bowels should be kept open, if possible, by gentle aperients, and should any accidental circumstance present, the patient rather refer a second venæsection. A warm cataplasm bleeding is a much greater relief than a cold. It also is better to take away blood in a small quantity, proportioned to the age and temperament of the patient, and to the severity of the disease, than in repeated small bleedings, which are not so short in their increased action, without any interval, or any check which is necessary, provided in the disease. And it seldom will be necessary to repeat the venæsection, if it has been carried to a proper extent at first.

However the propriety of repetition will be determined by the symptoms, still some moderate and manifest relief, as obtained the pain relaxes in equality, pulse hard and frequent, by the effects of the bleeding

bleeding on the pulse and the manner in which it recovers the system and by the buffy on the blood after having been drawn varicous being very firm, contract and opaque, its surface convex and its edges inclined, then very soon again. For 10 hrs after the first bleeding a large quantity should be extracted to the extent of ℥xij or xvj, sufficient to suspend the increased power of the circulation and produce a faint feeling or relaxation; this of course must be regulated by the nature of the case, the strength of the constitution and left to the judgment of practitioner. In this case remains full and the pain in the side, must bleeding is the only resource which the practitioner can rely. But neglecting to bleed under such circumstances there will be danger of suppuration, which occurs in 8 other hours that the first bleeding shows no effect, nothing should be repeated, either was demanded.

But, the blood after being drawn has a buffy or white surface, a semi transparent and greenish yellow colour with a strata of a viscous lymph running throughout general bleeding at this not a repeated sick.† The patient may wait about 18 or 24 hours after the first bleeding, or one hour should pass, how it necessary.

Should the inflammation spread round over the peritoneum mean

† Pemberton on the Abdominal Viscera page 25.

[illegible] the patient's being unable to extend his chest, without suffering considerable uneasiness and dyspnoea [illegible] the bleeding must not be neglected, [illegible] it must be repeated frequently at short intervals, if the disease be not disposed to yield. This is a very efficient and [illegible] remedy; the disease [illegible] the very moment at which [illegible] the remarkable [illegible] is laid from which [illegible] all [illegible] caution [illegible] remedy.

Local bleeding. At the same time [illegible] general bleeding [illegible] at early [illegible] we should [illegible] leeches [illegible] should the increased vascular action continue unabated it should be repeated. When there was [illegible] preferable [illegible] be obtained.

Some [illegible] this disorder and [illegible] parts [illegible]

[illegible] scar features and cut[illegible] In the milder cases [illegible] unattended with [illegible] [illegible] and [illegible] is [illegible] a cachectic state then local depletion [illegible] preferable.

The general and local depletion should be carried [illegible] [illegible] extensive bleeding [illegible] most successful mode of treatment [illegible] inflammation. [illegible]

Blistering. [illegible] general and local, without abatement of the symptoms in consequence of these means, or [illegible] applied on the affected part [illegible] in attempting resolution and [illegible] the side [illegible] [illegible] should be regulated [illegible]

But a quick [illegible] of [illegible] organ, prevails moreover [illegible]

[illegible] page 34

discharge from a single vesication or stimulating ointment; and from [illegible] ex-
perience I can not so strongly recommend this mode of application.+ Certain-
ly where the disease occurs in a debilitated [illegible] small [illegible]
[illegible] vitiated the constitution and the [illegible] and [illegible]
[illegible]
[illegible]
[illegible] And from [illegible] the experience I
suppose that their application [illegible]
continued on [illegible]
created as to increase [illegible]
of the system, especially [illegible] avoid these
and especially the agonizing effects of [illegible] where there is reason to ap-
prehend its occurrence, the blister should be removed [illegible] or
before the cuticle has been broken [illegible] a bread and milk poultice appli-
ed over the part [illegible] of se-
rum and it [illegible] that the discharge [illegible] fully
equal to what is produced [illegible]
[illegible] blister ^cause^ [illegible] and
the discharge thus produced [illegible]

+ [illegible] page 315.

in the reduction of the general excitement. A large blister over the affected part repeatedly appeares to remove or abatte inflammation and always relieved the pain in the side and shoulder, and the cough and had much better effects than bleeding, as the extent to which venesection could be carried in warm climates and in relaxed habits seldom, even relief. "Curtis on the Diseases," [illegible] 165.

Stimulating frictions. In the milder cases or more [illegible] spirits turpentine or the nitrous ether [illegible] may serve to keep up a revulsive effect [illegible] peral [illegible] [illegible] the inflammation.

Cool air. [illegible] [illegible]

Cool drink [illegible] [illegible]

Vegetable diet The use of [illegible] vegetable or farinaceous food [illegible] or racea ma[illegible] [illegible] the com-
[illegible], and [illegible] animal
food [illegible] or otherwise. The stomach probably is here, generally in a
condition ill prepared for [illegible] [illegible] food is
[illegible] ced into the stomach and not digested either [illegible]
[illegible] quantity will [illegible] into, reserve and [illegible] making [illegible] disorder [illegible] by
[illegible] on the liver and distress it thus causes [illegible] throughout the
whole system, instead of gently administering [illegible]
[illegible] light nutrition [illegible] system.

Purging or emptying the biliary ducts should in most
cases follow bleeding, for however rapid, the loss of the whole sys-
tem is lowered by large and repeated bleedings, general and local,
still in consequence of the peculiar nature of the circulation,
inflammation and other causes it is [illegible] a peculiar force
and [illegible] a treatment [illegible] measure of [illegible] the [illegible]
not [illegible] [illegible] [illegible] and [illegible],
[illegible] and [illegible] [illegible]
[illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible]

importance and should always be kept in view.

The result of [illegible] observed on the [illegible] and particularly in papers allied to [illegible] used in relation to the [illegible] and on the whole [illegible] of the [illegible] in [illegible] to be attended, first to reduce the tissues of the [illegible] and to free the biliary tubes and restore the [illegible].

Therefore, preserve, **saline cathartics** only for the purpose [illegible] gradually [illegible] have little effect in the office of the [illegible] in the liver and chiefly in the mucous membrane [illegible] and [illegible].

Note the increasing [illegible] [illegible] [illegible] [illegible] the venous [illegible] and [illegible] the action of the [illegible].

Given the **mercurial**, separation [illegible] [illegible] [illegible] the [illegible] and [illegible] vessels of the liver, so that [illegible] [illegible] and the peculiar power over the biliary [illegible] [illegible] cathartic effect, as the action of mercurials on the biliary glands [illegible] [illegible] [illegible] [illegible]

[illegible] well without effect. Tonics were found [illegible] [illegible] [illegible]

[illegible] infusion of senna ℥iss [illegible] ℥ss [illegible] tartrate, magnesia ℥j
sulph ros ℥iij, aqua fiat ℥j [illegible] in a cup of the cooling cathartic
[illegible] given, administered, as a [illegible] [illegible]
[illegible] [illegible] [illegible] will hold in solution for room [illegible] [illegible]
evacuations, constitutes an excellent, urgent, especially alternative to the
moderate use of calomel or [illegible] of the mercurial cathartics; after
[illegible] has been repeated it may then be exhibited in smaller doses every
3 or 4 hours to keep up, by its stimulus, a free evacuation from the bowels
of the secretions and resent [illegible] of the inflamed mucous.
[illegible] says, that such a cathartic exhibited in a [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
should not extend beyond two or three days, which when [illegible]
will be succeeded by [illegible] symptoms and [illegible]
[illegible] of a salutary [illegible] [illegible] [illegible]
active [illegible] [illegible] [illegible] [illegible]
[illegible] skin. Tartar emetic gr iv, nitrate ℥ij, pulv. ipec. ℈ss

[illegible] ℥ij [illegible],
[illegible] after each dose take [illegible] ℥ij [illegible]
[illegible] ℥j. [illegible] ℥ss [illegible] ℥ij [illegible].

Injections. Occasionally emollient injections to favour the operation of [illegible] or to mitigate [illegible] and [illegible] are [illegible] used or when [illegible] of [illegible] the [illegible] a strong [illegible] or [illegible], [illegible] occasionally [illegible] with [illegible].

[illegible] were [illegible] and [illegible] rest to the [illegible] patient. And this instruction is required [illegible] ideas. [illegible] by these means is [illegible] [illegible] still continue but more [illegible] as in the inflammatory [illegible] [illegible] the [illegible].

diaphoresis, particularly [illegible],

to which may be joined nitre potash. ℞ sal. ammon. ʒiß, nitre potash ℥ss, xv
tartarized antimony grs. ß, syr. ℥ii, ut fiat haustus, to be taken with the plentiful use of mild diluent and cooling drinks; blisters, the sudorific and the warm bath, if the skin continues hot and dry, and the use of the aqueous nitre severe, may be proper; "the warm bath at first with the diaphoretic nitre, considerable fever existed and fomes, over-blistered. I have used with attention" Clark. "I have evidently derived more benefit from fomentations, the warm bath than from any other remedy. A large piece of flannel dipped in a mixture of hot water was applied over the entire and renewed when it cooled, and the patient was placed in a bath surrounded, where the heat and the warmth is obtained more easily, and at the same time avoiding the usual inconvenience of immersion cold" Good's Study of Medicine page 263.

The refrigerating treatment should be commenced with such modifications as the circumstances and strength of the patient require, and continued for one week or until the inflammation or disease be quite completed.

If after, however, the inflammation is quite moderate, application may be extended as long as it is wanted.

Mercury. Acute hepatitis may be cured, in its first attack

+ Clark on Fevers page 79.

without respect to the future health of the patient [illegible] in [illegible] present relief, as pneumonia is; as it readily yields in most instances to the ordinary means of depletion. But the most certain means of guarding against future derangement of the liver in structure, or any important viscus is to restore its natural and healthy secretion.

Though in every inflammation of the liver with febrile excitement and particularly in cold latitudes, calomel as a purge is advisable at the commencement: still given to promote salivation, in the first stage, is improper and should not be used as it would increase the arterial action already over excited, yet when properly used this remedy appears to be very efficacious. For this

A certain period of the inflammatory attack is chosen, when the bowels have been thoroughly cleared and the excitement or urgent inflammatory symptoms in a certain measure reduced, after strictly pursuing the antiphlogistic [illegible] the disease still not giving way, and the alvine evacuations denoting [illegible] return; then mercury will come in with the greatest advantage and resort should be taken to its aid to the extent of producing a slight irritation on the mouth or tenderness of the gums which [illegible]

seldom fails to remove the complaint. But "this remedy or mercury, to the extent of producing salivation has not been so effectual in [illegible] and it only appears to be serviceable in the acute form when it acts as a [illegible] [illegible] [illegible] operates without producing salivation, (Cr.†). Finally it is meant when free and healthy biliary evacuations were procured, salutary effects appeared but when it [illegible] excited to action principally on the urine and salivary glands without producing a healthy biliary secretion or [illegible] the gall ducts no [illegible] effects were produced. And sometimes the patient will bear [illegible] [illegible] of the mercurial [illegible] without any affection of the mouth and gradually and insensibly improve. Indeed, the [illegible] subsiding, the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] such improvement [illegible] [illegible]. Dr. B‡ a respectable medical practitioner, relates a case of hepatitis which was [illegible] with a [illegible] lump of the right side which was [illegible] removed under the use of calomel for some time which however had no effect on the mouth, probably it [illegible] the liver restored its secretion functions and operated on the bowels." It is in recent attack [illegible] [illegible]

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† Curry Views, [illegible] [illegible] [illegible] [illegible] 120.
‡ [illegible] [illegible] [illegible]

that mercury has the best effects [illegible] [illegible] and freely until the mouth is affected. After bleeding [illegible] [illegible] [illegible] [illegible] I never saw a case terminate in suppuration." Dr [illegible].[†] "The [illegible] [illegible] of acute hepatic inflammation [illegible] the state of resolution is not immediately followed by a healthy condition of that organ but it remains for a time in debility disposed to relapse into a chronic state and this is probably the proper time for mercury and by [illegible] a mild stimulus on the vascular system of the organ [illegible] [illegible] a sufficient time [illegible] [illegible] effect [illegible] [illegible] [illegible]."

[‡] I find it is common to see [illegible] when the E.I. [illegible] [illegible] state except [illegible] that it [illegible] terminate in suppuration, as well as a relapse into a chronic form, that the success of mercurial treatment [illegible] [illegible] Johns.[‡] From [illegible] [illegible] it is clear [illegible] [illegible] that the indiscriminate use of mercury during the first inflammatory state, in northern latitudes, was abuse of the medicine. [illegible] soon as the pulse [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] where the case [illegible] very urgent [illegible] [illegible] considerable thirst heat and general fever were present, proved

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[†] [illegible] [illegible] [illegible] 27.

[‡] [illegible] [illegible] [illegible] page 229.

[‡] [illegible] [illegible] [illegible] Tropical [illegible] [illegible] 300

[illegible] not [illegible] in mostly succeeded in curing the disease. Cts.‡ And when it is said †that [illegible] was seen [illegible] of blood [illegible] inflammation [illegible] and that some cases occurred [illegible]

[illegible]

[illegible] of [illegible] No in these cases [illegible] illustrative [illegible] and and after [illegible] with

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† Curry, see Saunders on the Liver page 331.
‡ Curtis on the Diseases of India page 1[illegible].

[illegible] "These cases [illegible] 3 [illegible] cases [illegible] cholagogue, [illegible] recently he says the second [illegible] a general [illegible] action [illegible] without [illegible] and consequently without [illegible] experienced from mercury carried to the extent although [illegible] and valuable [illegible] according to Dunglison he says, your practice respecting the use of mercury [illegible] cholagogue to operate on the system at large exactly accords with what I have said on its general operation and is not [illegible] operation. Hence it is evident he does not allude to the general operation of mercury for which he acknowledges the system ought to be prepared amenable to mercury, but is alluding to its cathartic operation, and with it no doubt depletion was used. But his chief dependence [illegible] was on its action specifically and being a cholagogue or excitant of bile and its influencing the general detention

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] will be attended with important and salutary effects and abate the irritation. But where the stomach is extremely irritable and [illegible] which must be [illegible] calomel [illegible] joined with opium [illegible] which may be given to the [illegible] [illegible] calomel [illegible] [illegible] gr. with Ex. pil. [illegible] according to the [illegible] much less irritating than calomel is retained with [illegible]

[illegible] pain relief, and [illegible] so, especially [illegible] [illegible] [illegible]

[illegible] (Brandreth's pills) [illegible] [illegible] [illegible]

If the pain remaining diminish, however be retrograded and the disease yield readily, a short course of mercury will be sufficient, as [illegible]. And as soon as a brassy taste is perceived in the mouth, a mercurial fœtor in the breath or a spongy redness of the gums the medicine should generally be discontinued for a while or given in small quantities every [illegible] to prevent ptyalism which in the end may at last, be often necessary. But if it does not readily yield and sometimes, the disposition to terminate in scirrhus or diseased structure, is very great and can not be resisted by a moderate mercurial ptyalism, [illegible] of the pulse and tenderness of the mouth produce a gentle salivation which continued for 5 6 weeks and then gradually lessened [illegible] only once every 2 3 months, generally will effect a cure. Did time permit [illegible] of the effects of mercury, opium and antimonials [illegible] also [illegible] the secretion of healthy bile, the flow of saliva and a gentle respiration. Even since the nauseous effects of the medicine and inactivity [illegible] cure, yet it was necessary to maintain these effects by [illegible] over the system of the disease has vanished a clear countenance [illegible] and regular bowels had returned [illegible] health and strength [illegible] completely been restored.

+ [illegible] p. 206.

If there be considerable difficulty in introducing mercury into the system use for the inunction parts where the thinnest cuticle or where the cuticle has been removed by a blister. In obstinate cases when there is a strong [illegible] to salivation, such is the torpor of the absorbents [illegible] that there is great difficulty in introducing a sufficient quantity of mercury [illegible] and affect the mouth by the largest doses [illegible] and the inunction [illegible]. I have often been astonished at the quantity that would be [illegible] in [illegible] or otherwise [illegible] the absorbents on the surface, while ʒiij of ointment were rubbed in the three months.+

" [illegible] the chief reliance is placed on this remedy [illegible] much larger doses than are administered in common practice. I have much taken ℈xxx or ʒj a day without [illegible] the quantity [illegible] in relation to the bowels than smaller doses. But I have [illegible] from the [illegible] operation of mercury, as except in [illegible], though at first the disease has been removed, it returns too often and the foundation of relapses" Clark.

Whenever the mercurial preparations are indicated, the <u>nitro muriatic acid</u> will be useful and where mercury is highly injurious [illegible] the first case of [illegible] page 2.8.

from delicacy or peculiarity of constitution, or where other causes [illegible], the nitro-muriatic acid will be safe and advantageous" "When the pulse is quick and [illegible] strong [illegible] much inflammatory tendency, the acid would be [illegible] however [illegible] experienced a use of [illegible] not [illegible] at the commencement or soon after, certain [illegible]. Where the risk of abscess is real the acid alone should not be trusted, but though insufficient [illegible] [illegible] aids the use of mercury in preventing a termination so lamentable" Id.+ Sometimes after mercury has been used and salivation been induced and there still remain some [illegible] of the complaint, nitro-muriatic acid comes in very well and will often remove the remains of the disease. gtt xxx in lot. water at first during the day. A degree of obesity generally succeeds the exhibition of this medicine, and the cure of the disease [illegible] renewed energy [illegible] to the digestive organs On entering upon a course of mercury about ℥ii of a strong infusion of some bitter as quassia or gentian should be taken 3 times a day, to which may be added sufficient [illegible] to [illegible] every two days. [illegible] degrees the diet may be [illegible] as the improvement of the constitution and digestive organs will admit, with addition of animal broths, light animal food and [illegible].

+Scot on the Use of Nitromuriatic acid [illegible] Vol. [illegible]
No. [illegible] 1829.

[illegible] easy digestion, a nourishing diet, [illegible] stimulants & remembering the diet should always be maintained [illegible] after convalescence [illegible] otherwise there will be a risk of reproducing inflammatory excitement before health is perfectly restored.

If, when the disease is going off, the tired patient refuses further rest or timely treatment for the remains of the disease be neglected, chronic disorders will be left and prove extremely difficult of cure, particularly cirrhosis [illegible].

When [illegible] yellowness is observed in the eye, the pale yellow or waxen colour disappears from the face, the urine and faeces recover their natural appearances and there is no pain or oppression about the right hypochondrium, especially after eating or filling the stomach or after somewhat more than usual exercise, the cure is complete; and more especially if for several weeks after there be no return of the complaint.

In winter patients with this disease do not generally fare so well.

Termination Acute hepatitis like other inflammations may terminate in resolution suppuration, transudation of

[illegible] and adhesion of more inflammatory nature or severe or [illegible]

When the symptoms of acute inflammation have been checked though not effectually removed by the antiphlogistic practice, the disease frequently becomes chronic and terminates in [illegible] of the organ. The countenance has a peculiar cachectic appearance though not the appearance of jaundice except in a marked or extreme case of the liver, with indolence and [illegible] in the circulating system. In this diseased state the liver gradually becomes swelled and hard but afterwards a purulent matter is formed, it becomes diminished in size with some discoloration, [illegible] and continued to advance perhaps [illegible] years longer.

And this state the [illegible] may exist without any, or very active inflammation, especially in the E & W Indies or in the abuse of ardent spirits, when confirmed it is unmanageable and the patient often languishes a long time.

Appearance after death. "[illegible] contracted, [illegible] of a colour more deep, [illegible] natural [illegible] more or less attended with inflammation often extensive adhesions

to the neighbouring parts and sometimes large abscesses containing pus are formed in its substance; sometimes biliary calculi; in a few instances the liver has been found in a putrid state resembling honey comb; tubercular; or hydatids have sometimes been found in it or lumbrici in its ducts; occasionally with a coriaceous tunic; case, died of dropsy, the whole liver was dry, black, useless and appeared like leather shrivelled by heat and scarcely equaled two fists in bulk." (Van Swieten) †

When interior remittent fevers are conjoined with an affection of the liver, as every accession of the fever must necessarily increas the disorder and this again tend to increase the fever, if the pain in the side should be violent; hence the propriety of checking these as soon as possible by bark and mercury externally; the tonic and stimulant powers of the bark are much less to be dreaded than the effects of the febrile paroxysms.

Sometimes the same liver will be suffering, in one part from all the symptoms of active inflammation, even proceeding to a change of organization, while it is insensible, enlarged and inactive in another. And it is probably, this mixed state of derangement, which occasions those singularly changeable and almost indescribable symptoms so frequently experienced in hepatic affections. Thus the acute frequently partake

† Van Swieten's Commentaries on Boerhaave's Aphorisms, page 262, aphorism 950.

of the nature of chronic hepatitis.

Finis.

Wm Ashmead
1825